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Two new species of *Euthalia* (Lepidoptera, Nymphalidae) from northern Laos and northern Vietnam

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Abstract Two new nymphalids, *Euthalia khambounei* sp. n. and *Euthalia suprema* sp. n., are described from northern Laos and northern Vietnam.

Key words Lepidoptera, Nymphalidae, *Euthalia*, *Limbusa*, *Euthalia khambounei* sp. n., *Euthalia supremus* sp. n., *Euthalia leechi*, *Euthalia pyrrha*, male genitalia, northern Laos, northern Vietnam, taxonomy.

Two new species of the genus *Euthalia* Hübner, 1819 were discovered from northern Laos and northern Vietnam, both of them belonging to the continental species-group of the genus. After close examination and comparison with the related species, we describe them hereinafter.

Euthalia (*Limbusa*) *khambounei* sp. n. (Figs 1–4)

♂. Length of forewing 45–46 mm. Wing shape: forewing: costa evenly curved, with apex protruding; termen slightly excised around vein 4, and dentate at end of each vein; hind margin straight. Hindwing: termen dentate at end of each vein as in forewing. Wing pattern: upperside of forewing: ground color dark green, pale in outer half; subbasal circular marks peculiar to the genus conspicuous; a discal row of white spots running from spaces 6 to 2, white scales being not irrorated at costa, and a white spot in space 2 convex towards tornus; two white spots in spaces 8 and 6 in subapical area; a black subterminal band running from costa to space 1b, broadened around space 4; cilia white, stained with black beyond veins. Upperside of hindwing: ground color as in forewing, tinged with blue from spaces 7 to 5 in costal area; an obscure black oblong marking at discocellular; a discal row of white spots reduced to spaces 7 and 6; a dark blue subterminal band running from spaces 7 to 1b; cilia white, stained with black beyond veins, as in forewing. Underside of forewing: ground color pale greenish blue; a black subterminal band running from costa to space 1a, broadened in space 1b. Underside of hindwing: ground color as in forewing; basal irregularly circular markings conspicuous; a black line present inside a discal row of white spots from spaces 7 to 5, edging inside the white spots; a black subterminal band running from spaces 7 to 1b. Venation: hindwing cell open. Antenna: black above and blackish brown beneath, without yellowing brown part at tip.

Male genitalia (Fig. 15). Uncus gradually narrowed towards tip. Valva slender, slightly broadened near middle, bearing spines at tip.

♀. Length of forewing 48–49 mm. Wing shape as in male. Wing pattern: nearly as in male, but the discal white spots in forewing larger and a subterminal black band in upperside of hindwing a little obscure than those in male.

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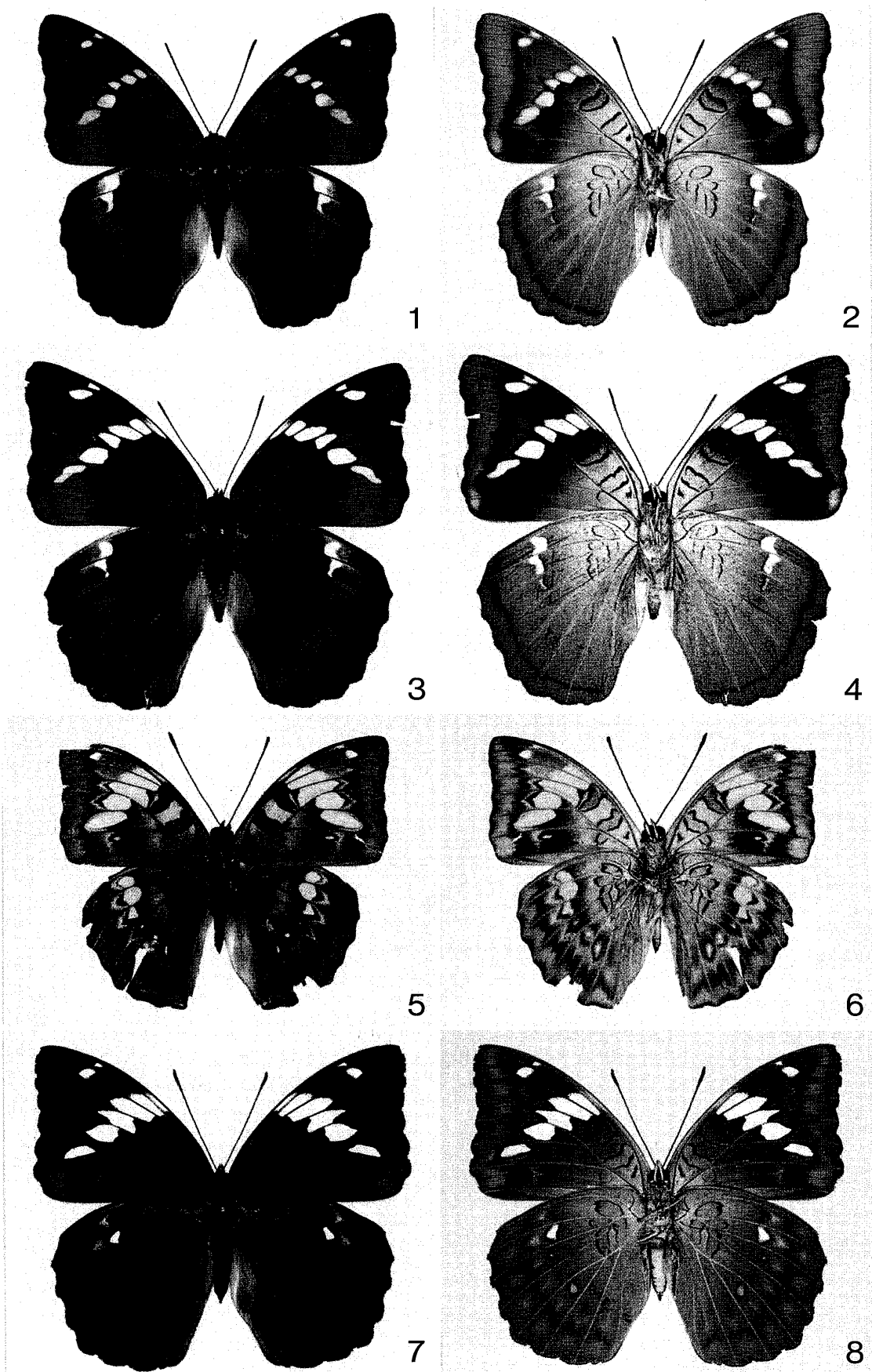
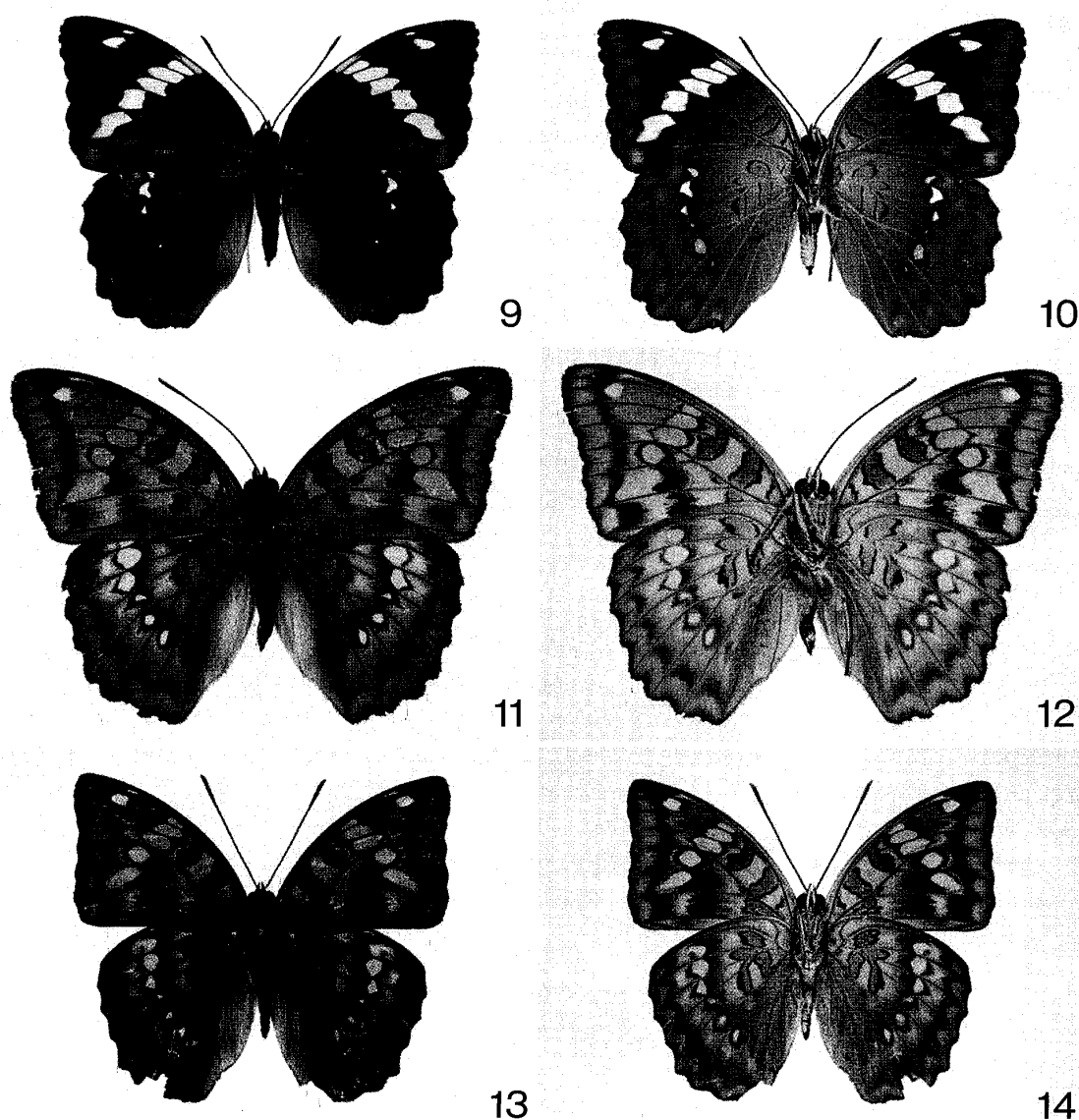

Figs 9–14. *Euthalia* (*Limbusa*) *pyrrha*. 9–10. Syntype ♀ of *Euthalia leechi*, in coll. The Natural History Museum, London. 11–12. Syntype ♂ of *Euthalia pyrrha*, in coll. The Natural History Museum, London. 13–14. ♂, northern Laos, in coll. Uehara.

Distribution. Northern Laos and northern Vietnam.

Holotype. ♂, Xamneua, Laos, 31 May 1999, now in coll. Uehara, will be deposited in Kitakyushu Museum & Institute of Natural History, Fukuoka (KMNH). Paratypes. The same locality as holotype, 1 ♀, 27 July 1998; 1 ♀, 8 Aug. 1998; 1 ♀, 25 Aug. 1998; 1 ♀, 10 Sept. 1998 (in coll. Yokochi); 1 ♂, 6 June 1999; 1 ♂, 30 July 1999; 1 ♀, 7 Aug. 1999; 1 ♀, 3 Sept. 1999; 1 ♂, 11 Sept. 1999; 1 ♂, 22 June 2000; 1 ♂, 27 June 2000 (in coll. Yokochi); 2 ♂, 5 July 2000; 1 ♀, 27 July 2000; 1 ♂, 30 July 2000 (in coll. Yokochi); 1 ♀, 9 Sept. 2000;

Figs 1–8. *Euthalia* (*Limbusa*) spp. 1–4. *E.* (*L.*) *khambounei* sp. n. (1–2: Holotype, ♂, now in coll. Uehara. 3–4: Paraype, ♀, in coll. Uehara). 5–8. *E.* (*L.*) *suprema* sp. n. (5–6: Holotype ♂, now in coll. Uehara. 7–8: Paraype, ♀, in coll. Uehara).

1 ♂, 24 Sept. 2000; 1 ♂, 23 June 2001. 1 ♂, Tonkin, N.Vietnam, no collecting date (in coll. Museum National d'Histoire Naturelle Entomologie, Paris). Paratypes are preserved in coll. Uehara otherwise stated in parentheses.

Remarks. This new species is readily distinguished from other congeners by its unique pattern and coloration. The specific name is dedicated to Mr Khamboune, the Laotian guide who kindly cooperated with us to collect this species in Laos.

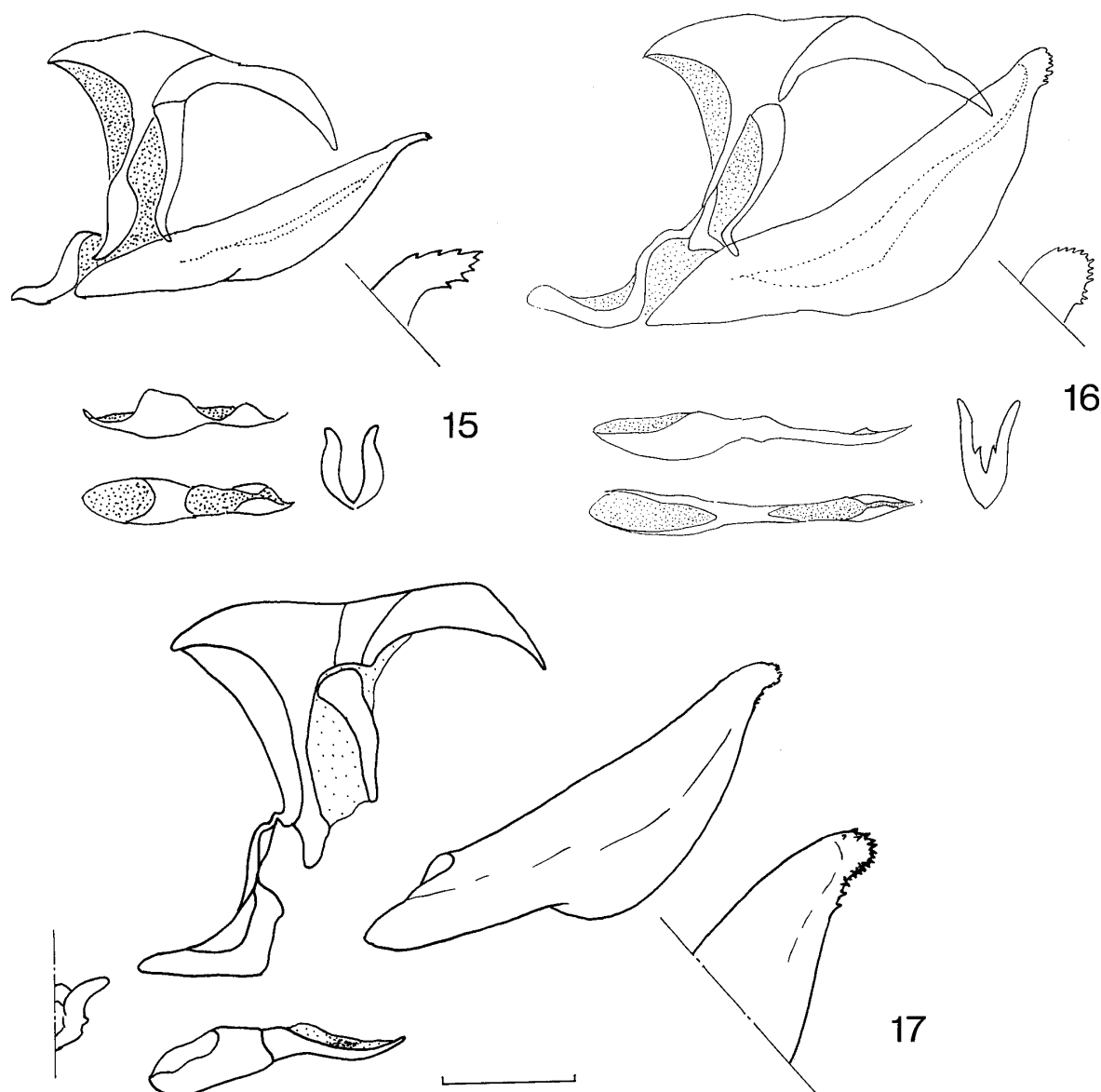
***Euthalia* (*Limbusa*) *suprema* sp. n.** (Figs 5-8)

♂. Length of forewing 40 mm. Wing shape: forewing: costa evenly curved, with apex acute; termen slightly excised around vein 4, and dentate at end of each vein; hind margin straight. Hindwing: termen dentate at end of each vein as in forewing. Wing pattern: upperside of forewing: ground color pale olive green; subbasal circular patches peculiar to the genus conspicuous; a discal band comprised of pale yellow spots from spaces 6 to 2, edged outside with black wedge-shaped marks in spaces 4 and 3; spots in spaces 6 to 2 large and fully overlapped, and spot in space 1b rudimentary; costa above a discal band irrorated with pale yellow scales; two pale yellow spots in spaces 8 and 6 in subapical area; a subterminal row of dark green wedge-shaped spots running from spaces 6 to 2, and a dark green shade in space 1b; termen pale olive green. Upperside of hindwing: ground color as in forewing; a conspicuous black oblong marking at discocellular; a discal row of pale yellow spots extending from spaces 7 to 2, edged outside with dark green wedge-shaped marks; a spot in space 5 convex outwards, and spots in spaces 4 to 2 rudimentary; a dark green subterminal band running from spaces 7 to 1b; termen pale olive green. Underside of both wings: ground color pale greenish blue; basal irregularly circular markings of hindwing conspicuous. Venation: hindwing cell open. Antenna: black above and brown beneath in shaft and at tip, with a club black except tip.

Male genitalia (Fig. 16). Uncus gradually narrowed towards tip; valva somewhat slenderer, slightly broadened near middle, with spines at tip. Aedeagus slender.

♀. Length of forewing 48-51 mm. Wing shape as in male, but hindwing a little protruding around vein 3. Wing pattern: upperside of forewing: ground color dark green; subbasal circular patches peculiar to the genus conspicuous; a discal row of spots white, running from spaces 6 to 2; spots from spaces 6 to 3 touching each other, and that in space 2 separated from that in space 3; costa above a discal band irrorated with white scales; two white spots in spaces 8 and 6 in subapical area; termen pale olive green; cilia white, stained with black beyond veins. Upperside of hindwing: ground color as in forewing; a conspicuous black oblong marking at discocellular; a white spot in space 6 in discal area; an indistinct subterminal row of black spots running from spaces 7 to 1b; cilia white, stained with black beyond veins, as in forewing. Underside of forewing: ground color pale greenish blue, with a black shade in space 1b in subterminal area. Underside of hindwing: ground color as in forewing; basal irregularly circular markings conspicuous; a series of discal white spots in spaces 7 and 6 and again from spaces 4 to 2, those in spaces 7 and 6 rudimentary; an indistinct subterminal row of dark green wedge-shaped spots running from spaces 7 to 1b. Venation: same as in male. Antenna: same as in male.

Distribution. Northern Laos.

Holotype. ♂, Xamneua, Laos, 11 July 2000, now in coll. Uehara, will be deposited in Kitakyushu Museum & Institute of Natural History, Fukuoka (KMNH). Paratypes. The

Figs 15–17. Male genitalia of *Euthalia* (*Limbusa*) spp. 15. *E*. (*L*.) *khambounei* sp. n. 16. *E*. (*L*.) *suprema* sp. n. 17. *E*. (*L*.) *pyrrha*.

same locality as holotype. 1 ♀, 18 June 1999; 1 ♀, 30 June 2000; 1 ♀, 28 Aug. 2000; 1 ♂, 8 May 2001; 1 ♂, 20 May 2001 (in coll. Yokochi); 1 ♂, 24 May 2001; 1 ♂, 23 June 2001. Paratypes are in coll. Uehara otherwise stated in parentheses.

Remarks. The male of this new species closely resembles "*Euthalia leechi*" (Figs 9, 10) described by Oberthür in 1907 based on the males as types from Sichuan, China. *E. leechi* should be a synonym of *E. pyrrha* (Figs 11, 12) described by Leech in 1892 based on the female from S. China. Here we present their synonymy.

Euthalia* (*Limbusa*) *pyrrha Leech, 1892 (Figs 9–14)

Euthalia pyrrha Leech, 1892: 137, pl. 21, fig. 4 (♀). Syntypes 5 ♀, China: Kwei-chow, Moupin, Omei-Shan (The Natural History Museum, London), [examined].

Euthalia leechi Oberthür, 1907: 259. Syntypes 4 ♂, China: Moupin, Siao-lou (The Natural History Museum, London), [examined]. **Syn. nov.**

E. pyrrha has also been recorded from northern Laos (Figs 13, 14), and the discriminating points between *pyrrha* and the present new species are summarized as follows.

Male. Wing shape similar to each other, but the terminal dentation in hindwing stronger in *pyrrha*. Wing pattern: a discal white band of forewing larger in this new species, but the wedge-shaped marks in spaces 4 and 3 edging outside the white spots not so obvious; the white spot in space 5 of hindwing convex outwards in both species, but its outer black wedge-shaped, and white wedge-shaped marks more conspicuous in this new species. Antenna black above, but uniformly brown beneath in *pyrrha*. Male genitalia. Spines around tip of valva nearly identical in both species, but ventral lobe of valva more strongly convex in *pyrrha* (Fig. 17); uncus shorter and thicker in *pyrrha* (Fig. 17).

Female. The female of *pyrrha* from northern Laos has not been examined, and the following differences are based on comparison with the specimens from known localities (China: Sichuan, Fujian). Wing shape with the terminal dentation in hindwing stronger in *pyrrha* as in male. Wing pattern: basic pattern similar to each other, but the white spot in space 3 of forewing convex outwards in this new species, while it is nearly square in *pyrrha*. Antennal difference as in male.

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摘　　要

ラオス北部およびベトナム北部より記録されたイナズマチョウ属の2新種の記載（上原　二郎・横地　隆）

ラオス北部およびベトナム北部より発見された大陸系イナズマチョウ属の2新種を記載し，併せて近縁種との比較・検討を行った．

Euthalia (*Limbusa*) *khambounei* sp. nov. (図 1–4)

♂. 前翅長 45–46 mm. 翅形: 前翅，前縁は滑らかに湾曲し，翅頂は尖る; 外縁は第4脈付近でわずかに抉れ，各翅脈端はやや突出する; 後縁は直線状. 後翅，前翅同様外縁は各翅脈端でやや突出する．表面: 前翅，地色は暗緑色だが外半部は淡色を帯びる; 基部付近の本属特有の環状斑群は明瞭; 外中央白紋列は第2室から第6室におよび，第2室は後縁角の方向に尖る; 前縁には白色鱗が侵入しない; 亜翅端部は第6室と第8室に白色紋がある; 亜外縁部は第1b室から前縁部にかけて黒色帯があり，第4室

付近が太い; 縁毛は白色で翅脈端は黒色. 後翅, 地色は前翅と同様だが, 前縁部の第5室から第7室は青色を帯びる; 中室端の黒色だ円形紋は不明瞭; 外中央白紋列は第6室と第7室にとどまる; 亜外縁部は第1b室から第7室にかけて濃紺色帯がある; 縁毛は前翅同様白色で翅脈端は黒色. 裏面: 前後翅の地色は淡緑青色. 前翅; 亜外縁部は第1a室から前縁部にかけて黒色帯があり, 第1b室が太い. 後翅, 基部の不正形環状斑は明瞭; 外中央白紋列の内側は第5室から第7室にかけて黒条があり白紋の内側を縁どる; 亜外縁部は第1b室より第7室まで黒色帯がある. 翅脈: 後翅中室端は開く. 触角: 表面は黒色; 裏面黒褐色; 先端に黄褐色部はない.

♂ゲニタリア (図15): 先端方向に一様に先細る; valvaは細長く, 中央部がやや太く, 先端部分は棘がある.

♀. 前翅長48–49 mm. ♂に同形. 斑紋: ♂に同形だが, 前翅外中央白紋は♂より大きく, 後翅表面亜外縁部黒色帯はやや不明瞭.

分布: ラオス北部, ベトナム北部.

近縁種との比較: 類似するものはなく, 容易に鑑別できる.

Euthalia (*Limbusa*) *suprema* sp. nov. (図5–8)

♂. 前翅長40 mm. 翅形: 前翅, 前縁は滑らかに湾曲し, 翅頂は尖る; 外縁は第4脈付近でわずかに抉れ, 各翅脈端はやや突出する; 後縁は直線状. 後翅, 前翅同様外縁は各翅脈端でやや突出する. 表面: 前翅, 地色は淡灰緑色; 基部付近の本属特有の環状斑群は明瞭; 外中央白紋列は淡黄色で第1b室から第6室におよび, 第1b室は痕跡的で, 第2室から第6室までの紋は大きく十分重なり, 第3室と第4室の外側に黒色のくさび形の縁取りがある; 前縁には淡黄鱗が侵入する; 亜翅端部は第6室と第8室に淡黄色紋がある; 亜外縁部は第1b室に暗緑色部があり, 第2室から第6室まで暗緑色のくさび形紋列がある; 外縁部は淡灰緑色. 後翅, 地色は前翅と同様; 中室端の黒色だ円形紋は明瞭; 淡黄色の外中央紋列は第2室から第7室におよび, 第2室から第4室の紋は痕跡的で, 第5室は外縁側が尖る. 各紋の外側は暗緑色のくさび形縁取りがある; 亜外縁部は第1b室から第7室にかけて暗緑色帯がある; 外縁は淡灰緑色. 裏面: 前後翅の地色は淡緑青色. 後翅, 基部の不正形環状斑は明瞭. 翅脈: 後翅中室端は開く. 触角: 表面は黒色; 裏面は軸部とこん棒部先端が褐色で, 先端部を除くこん棒部は黒色.

♂ゲニタリア (図16): Uncusは先端方向に一様に先細る; valvaはやや細長く, 中央部がやや太く, 先端部分は棘がある. Adeagusは細長い.

♀. 前翅長48–51 mm. ♂に同形だが後翅第3室端付近がやや突出する. 表面: 前翅, 地色は暗緑色; 基部付近の本属特有の環状斑群は明瞭; 外中央紋列は白色で第2室から第6室におよび, 第3室から第6室までは連続するが, 第2室は第3室と離れる; 前縁には白色鱗が侵入する; 亜翅端部は第6室と第8室に白色紋がある; 外縁部は淡灰緑色; 縁毛は白色で翅脈端は黒色. 後翅, 地色は前翅と同様; 中室端の黒色だ円形紋は明瞭; 外中央部は第6室に白紋がある; 亜外縁部は第1b室から第7室にかけて不明瞭な黒色紋列がある; 縁毛は前翅同様白色で翅脈端は黒色. 裏面: 前後翅の地色は淡緑青色. 前翅; 亜外縁部第1b室に黒色部がある. 後翅, 基部の不正形環状斑は明瞭; 外中央部は第2室から第4室と第6室第7室に白紋があるが, 第3室第4室以外は痕跡的; 亜外縁部は第1b室より第7室まで不明瞭な暗緑色のくさび形紋がある. 翅脈: ♂と同様. 触角: ♂と同様.

分布: ラオス北部.

近縁種との比較: 本種の♂は, 1907年にOberthürが♂をタイプとして中国四川省から記載した"*Euthalia leechi*" (図9, 10) と類似している. ただしこの*leechi*は, 1892年Leechが♀で記載した*pyrrha* (図11, 12) のシノニムとするのが妥当である.

Euthalia (*Limbusa*) *pyrrha* Leech, 1892

*E. pyrrha*は本新種と同じくラオス北部からも記録されており (図13, 14), 両種の鑑別点を以下に示す.

♂. 翅形: 両種ともほぼ類似するが, *pyrrha*は後翅各脈端の突出が強い.

斑紋: 前翅外中央白紋列は本種のほうが大きくなり, 第3, 4室の白紋外側のくさび形の縁どりは明瞭でない. 後翅第5室の白紋は両種とも外縁側に尖るが, 本種ではその外縁側の黒色くさび紋, 白色くさ

び紋がより明瞭となる. 触角: 表面は黒色, 裏面は一様に褐色である.

♂ゲニタリア (図 17): Valva 先端の棘はほぼ同一だが, *pyrrha* では ventral lobe の張り出しが強い; uncus は *pyrrha* のほうがより短く, 太い.

♀. ラオス北部から *pyrrha* の♀はまだ記録がないため, 既知の産地 (中国四川省, 福建省) のものと比較する.

翅形: ♂と同様に, *pyrrha* では後翅各脈端の突出が強い.

斑紋: 両種の基本的な斑紋構成は類似するが, 前翅第 3 室の白紋は本種では外側に尖るのに対して, *pyrrha* ではほぼ正方形となる. 触角: ♂と同様.

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